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Patent and Trademark Office

NOTICE OF ALLOWANCE AND ISSUE FEE DUE

LM21/0617

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APPLICATION NO.	FILING DATE	TOTAL CLAIMS	EXAMINER AND GROUP ART UNIT	DATE MAILED
09/111,305	07/07/98	033	EL HADY, N	2783 06/17/99
First Named Applicant	TSAT, 35 USC 154(b) term ext. = 0 Days.			

TITLE OF INVENTION MICROCOMPUTER WITH EMBEDDED FLASH MEMORY HAVING ON-CHIP PROGRAMMING CAPABILITY AND METHOD OF PROGRAMMING DATA INTO THE EMBEDDED FLASH MEMORY

ATTY'S DOCKET NO.	CLASS-SUBCLASS	BATCH NO.	APPLN. TYPE	SMALL ENTITY	FEE DUE	DATE DUE
0 252302-1100	712-037.000	U55	UTILITY	NO	\$1210.00	09/17/99

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED.

THE ISSUE FEE MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED.

HOW TO RESPOND TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.
If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the status is changed, pay twice the amount of the FEE DUE shown above and notify the Patent and Trademark Office of the change in status, or
- B. If the status is the same, pay the FEE DUE shown above.

If the SMALL ENTITY is shown as NO:

- A. Pay FEE DUE shown above, or
- B. File verified statement of Small Entity Status before, or with, payment of 1/2 the FEE DUE shown above.

II. Part B-Issue Fee Transmittal should be completed and returned to the Patent and Trademark Office (PTO) with your ISSUE FEE. Even if the ISSUE FEE has already been paid by charge to deposit account, Part B Issue Fee Transmittal should be completed and returned. If you are charging the ISSUE FEE to your deposit account, section "4b" of Part B-Issue Fee Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give application number and batch number.
Please direct all communications prior to issuance to Box ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

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**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/111,305	07/07/98	TSAI	H 252302-1100

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EXAMINER

EL HADY, N

ART UNIT

PAPER NUMBER

2783

DATE MAILED:

06/17/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Notice of Allowability

Application No.
09/111,305

Applicant(s)
Tsai et al.

Examiner
Nabil El-Hady

Group Art Unit
2783



All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance and Issue Fee Due or other appropriate communication will be mailed in due course.

☒ This communication is responsive to 7/7/1998

☒ The allowed claim(s) is/are 1-33

☒ The drawings filed on Jul 7, 1998 are acceptable.

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☒ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

A SHORTENED STATUTORY PERIOD FOR RESPONSE to comply with the requirements noted below is set to EXPIRE THREE MONTHS FROM THE "DATE MAILED" of this Office action. Failure to timely comply will result in ABANDONMENT of this application. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

☐ Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION, PTO-152, which discloses that the oath or declaration is deficient. A SUBSTITUTE OATH OR DECLARATION IS REQUIRED.

☐ Applicant MUST submit NEW FORMAL DRAWINGS

☐ because the originally filed drawings were declared by applicant to be informal.

☐ including changes required by the Notice of Draftsperson's Patent Drawing Review, PTO-948, attached hereto or to Paper No. _____

☐ including changes required by the proposed drawing correction filed on _____, which has been approved by the examiner.

☐ including changes required by the attached Examiner's Amendment/Comment.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the reverse side of the drawings. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

☐ Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Any response to this letter should include, in the upper right hand corner, the APPLICATION NUMBER (SERIES CODE/SERIAL NUMBER). If applicant has received a Notice of Allowance and Issue Fee Due, the ISSUE BATCH NUMBER and DATE of the NOTICE OF ALLOWANCE should also be included.

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

☒ Interview Summary, PTO-413

☒ Examiner's Amendment/Comment

☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

☒ Examiner's Statement of Reasons for Allowance

Meng-Ai T. Ah
Supervisory Patent Examiner
Technology Center 2700

Art Unit: 2783

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Daniel R. McClure, Reg. No. 38,962 on June 15, 1999.

2. The application has been amended as follows:

In the claims:

I. In claim 1:

[a] line 23, replace "the received" with -- externally received --;

[b] line 28, before "idle" insert -- an --;

II. In claim 14:

[a] line 22, replace "the received" with -- externally received --;

[b] line 24, after "used" insert -- to --;

[c] line 25, delete "to";

[b] line 26, before "idle" insert -- an --;

Art Unit: 2783

III. In claim 25:

a1 { [a] line 1, replace "and" with -- including a timer capable of generating an interrupt signal, --;

[b] line 2, after "unit" insert -- , and a register set --;

a2 { [c] line 7, replace "programming mode;" with -- a programming mode, and sending a signal by

the microprocessor unit to select the loader block of the embedded flash memory as the active block and to connect the loader block to the microprocessor unit; --;

{ [d] line 9, after "unit" insert -- by the microprocessor unit --;

[e] line 12, replace "receiving one block of the new data" with -- externally receiving and temporarily storing the new data into the register set;

a3 (6) setting the timer in the microprocessor unit with the period of time required to program one block of the new data into the user block of the embedded flash memory unit;

(7) switching the microprocessor unit to an idle mode, and sending a signal by the microprocessor unit to select the user block of the embedded flash memory as the active block and to connect the user block to the register set; --;

{ [f] line 13, replace "6" with -- 8 --;

[g] lines 13-14, replace "microprocessor unit; and" with -- embedded flash memory unit;

a4 { (9) upon receiving the interrupt signal from the timer, waking up the microprocessor unit from the idle mode; --

{ [h] line 15, replace "7" with -- 10 --;

Art Unit: 2783

3. The following is an examiner's statement of reasons for allowance:

None of the prior art of record teaches or suggests individually or in combination the system of a microcomputer with a microprocessor and embedded flash memory having on chip programming capability, wherein the embedded flash memory is partitioned into at least two blocks, a loader block and a user block for storing a loader program and an application program, respectively. In a programming mode, the microprocessor selects the loader block to be active, fetching and executing the loader program, and in an idle mode, the microprocessor selects the user block to be active allowing externally received data which are temporarily transferred and stored in a register set to be transferred and written into the user block of the embedded flash memory, wherein an interrupt signal generated by a timer causes the microprocessor to wake up from the idle mode and resume operation after the preset period of time required to write one block of data into the user block elapses.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Art Unit: 2783

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Nabil El-Hady whose telephone number is (703) 308-7900. The examiner can normally be reached on Monday-Friday from 9:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An, can be reached on (703) 305-9678. The fax phone number for this Group is (703) 305-3718.

An inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.



Meng-Ai T. An
Supervisory Patent Examiner
Technology Center 2700

Nabil El-Hady

June 15, 1999